

III. Remarks

Claim 11 has been allowed.

Claims 7, 11, and 16-50 are pending herein.

Claims 1-6, 8-10, and 12-15 have been canceled without prejudice or disclaimer.

Claim 7 has been amended.

Claims 11 and 16-46 have been previously presented.

Claims 47-50 have been added.

Reconsideration of claims 7 and 16-46 in light of the above amendments and the following remarks is requested. Claim 11 stands allowed, and new claims 47-50 have been added by this amendment.

A. *Independent Claim 7*

Independent claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of JP 2001096442 (JP'442). Applicant respectfully traverses the Examiner's rejection of claim 7, as amended, for the following, mutually exclusive reasons.

1) Even when combined, the references do not teach the claimed subject matter.

AAPA and JP'442 cannot be applied to reject claim 7 under 35 U.S.C. § 103(a), which provides that:

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains . . .

(emphasis added). Thus, when evaluating a claim for determining obviousness, all limitations of a claim must be evaluated.

However, Applicant has carefully reviewed AAPA and JP'442 and it is clear that neither AAPA nor JP'442, nor their combination, discloses or suggests slitting the rail longitudinally to separate the rail into a first piece and a second piece wherein the rail is slit across a hole in the web portion and deforming the first and second pieces of the rail. With respect to rails to be

recycled having holes formed therein, AAPA merely discloses separating and scrapping that portion of the rail containing a hole as unsuitable. And although JP'442 discloses machining a transverse notch into the surface of a rail, it does not disclose slitting the rail longitudinally to separate the rail into a first piece and a second piece wherein the rail is slit across a hole that extends through the web portion. Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection of claim 7 under 35 U.S.C. § 103(a) should be withdrawn.

2) The references are not properly combinable as the prior art does not suggest the combination.

MPEP § 2142 provides that “the examiner must step backward in time and into the shoes worn by the hypothetical ‘person of ordinary skill in the art’ when the invention was unknown and just before it was made.” MPEP § 2143 further provides that:

“[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.”

Therefore, when considered by a person of ordinary skill in the art, the references must provide some suggestion, desirability, or motivation for combination.

Here, neither AAPA nor JP'442 teaches, or even suggests, the desirability of the combination of elements as proposed by the examiner to reject claim 7 since neither teaches or suggests the desirability of a method for recycling a rail, comprising providing a rail wherein the rail comprises a lower portion, an upper portion, a web portion linking the lower portion and the upper portion, and a hole formed in the web portion, heating the rail, slitting the rail longitudinally to separate the rail into a first piece and a second piece wherein the rail is slit across a hole in the web portion, and deforming the first and second pieces of the rail, as is now claimed in amended claim 7.

While JP'442 teaches fracturing a rail at a notched stress concentration point, that fracture is transverse, not longitudinal, the method involves a superficial notch, not a slit across an interior hole, and the operation is performed in anticipation of scrapping the rail section and not as preparation for deformation.

Therefore, it is clear that neither AAPA nor JP'442 provide any incentive or motivation supporting the desirability of the combination. Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection under 35 U.S.C. § 103(a) should be withdrawn.

3) The references are not properly combinable as their intended functions would be destroyed.

As noted by Examiner, JP'442 teaches a method of reducing the energy required to fracture rail. The stated objective of JP'442 is to break the 10-meter long rail into pieces that are 1 meter or less in length. As discussed above, AAPA discloses a method of slitting a rail longitudinally into three portions that extend the entire length of the original rail. It is clear that AAPA and JP'442 are not properly combinable since, if combined, at least one of their intended functions is destroyed. Specifically, the application of the notching and transverse fracturing methods of JP'442 to AAPA would counter the purpose of AAPA. The notching and transverse fracturing methods of JP'442 would destroy the efficiency of AAPA by decreasing both the amount of material available for recycling and the length of the recycled sections. The cutting of additional notches in the rail would further destroy AAPA's efficiency by increasing both the amount of scrap rail material produced and the number of operations required in the recycling process.

Thus, since this modification of AAPA clearly destroys the purpose or function of AAPA, one of ordinary skill in the art would not have found a reason to make the claimed modification. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection under 35 U.S.C. § 103(a) should be withdrawn.

B. Independent Claim 16

Independent claim 16 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of JP'442. Applicant respectfully traverses the Examiner's rejection of claim 16 for the following, mutually exclusive reasons.

1) Even when combined, the references do not teach the claimed subject matter.

As discussed above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. Applicant has carefully reviewed AAPA and JP'442 and it is clear that neither AAPA nor JP'442 discloses or suggests a method for reducing structural defects in a recycled rail, comprising providing a rail having a hole formed therein, slitting the rail across the hole to separate the rail into a first piece and a second piece, whereby slitting the rail across the hole defines a partial hole in each of the first and second pieces, and deforming the first and second pieces of the rail in at least one reduction pass, whereby deformation of the first and second pieces elongates the partial holes of the first and second pieces, as is claimed in amended claim 16.

AAPA discloses a method wherein the upper, lower, and web portions are separated by slitting prior to deformation and JP'442 discloses a method of notching a rail to create a transverse stress fracture. However, since AAPA specifies that any portions containing holes are scrapped and JP'442 involves neither cutting through a hole nor deforming any resulting partial holes, the combination of AAPA and JP'442 teaches neither slitting a rail through a hole to define a partial hole in each piece nor deforming a rail section such that partial holes in the rail are elongated to reduce structural defects.

Therefore, it is impossible to render the subject matter of claim 16 as a whole obvious, and the explicit terms of the statute cannot be met. Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection of claim 16 under 35 U.S.C. § 103(a) should be withdrawn.

2) The references are not properly combinable as the prior art does not suggest the combination.

As discussed above, when considered by a person of ordinary skill in the art, the references must provide some suggestion, desirability, or motivation for combination to support a 35 U.S.C. § 103(a) rejection.

Here, neither AAPA nor JP'442 teaches, or even suggests, the desirability of the combination of elements as proposed by the examiner to reject claim 16 since neither teaches or suggests the desirability of a method for reducing structural defects in a recycled rail, comprising

providing a rail having a hole formed therein, slitting the rail across the hole to separate the rail into a first piece and a second piece, whereby slitting the rail across the hole defines a partial hole in each of the first and second pieces, and deforming the first and second pieces of the rail in at least one reduction pass, whereby deformation of the first and second pieces elongates the partial holes of the first and second pieces, as is now claimed in amended claim 16.

Therefore, it is clear that neither AAPA nor JP'442 provide any incentive or motivation supporting the desirability of the combination. Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection under 35 U.S.C. § 103(a) should be withdrawn.

C. Independent Claim 18

Independent claim 18 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA. Applicant respectfully traverses the Examiner's rejection of claim 18 on the ground that AAPA does not teach the claimed subject matter.

As discussed above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. Applicant has carefully reviewed AAPA and it is clear that AAPA neither discloses or suggests a method for recycling a rail, the method comprising providing the rail, slitting the rail generally in half to separate the rail generally into a first half and a second half, and deforming the first and second halves, as is claimed in claim 18.

AAPA discloses a method wherein a rail is subjected to "multiple slits in the rail to separate the lower portion, the web portion, and the upper portion of the rail . . ." *Application 10/635,948, Pages 1-2, Paragraph 4*. AAPA thus teaches a method that requires at least two slits and results in at least three separate lengths of rail that are not necessarily equal in cross-sectional area and will yield different sizes of recycled rail product after deformation. The separation of the rail into at least three portions in AAPA is performed to compensate for the irregular geometric orientations existing in the cross-section of whole rail. The present invention successfully deforms rail containing the geometric orientations resulting from splitting the rail into only two pieces, rather than three. Such accommodation of irregular rail cross-sections is neither taught nor suggested in AAPA.

As the Examiner admits, AAPA “does not disclose the rail being slit generally in half to separate the rail generally into a first half and a second half.” To cure this deficiency, the Examiner states that splitting the rail generally in half would be obvious to those skilled in the art since the number of slits would be selected to “facilitate recycling.” It is not until Applicant’s teaching, however, that one skilled in the art would have ever considered a single slit to “facilitate recycling.” A single slit results in two pieces that were previously considered more difficult to roll, and thus intentionally avoided by those skilled in the art. It is only through the method disclosed herein by Applicant that those skilled in the art would see the benefit of a single slit. Therefore, it is impossible to render the subject matter of claim 18 as a whole obvious, and the explicit terms of the statute cannot be met. Thus, the Examiner’s burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection of claim 18 under 35 U.S.C. § 103(a) should be withdrawn.

D. Independent Claim 27

Independent claim 27 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of JP’442. Applicant respectfully traverses the Examiner’s rejection of claim 27 on the ground that AAPA does not teach the claimed subject matter.

As discussed above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. Applicant has carefully reviewed AAPA and JP’442 and it is clear that neither AAPA nor JP’442 discloses or suggests a method for recycling a rail, the method comprising providing the rail, slitting the rail to separate the rail into only two pieces and deforming the two pieces, as is claimed in claim 27.

The separation of the rail into at least three portions in AAPA is performed to compensate for the irregular geometric orientations existing in the cross-section of whole rail. The present invention successfully deforms rail containing the geometric orientations resulting from splitting the rail into only two pieces, rather than three. Such accommodation of irregular rail cross-sections is neither taught nor suggested in AAPA. Therefore, it is impossible to render the subject matter of claim 27 as a whole obvious, and the explicit terms of the statute cannot be met. Thus, the Examiner’s burden of factually supporting a prima facie case of obviousness

clearly cannot be met, and the rejection of claim 27 under 35 U.S.C. § 103(a) should be withdrawn.

E. Independent Claim 36

Independent claim 36 was rejected under 35 U.S.C. § 103(a) as being unpatentable over AAPA in view of JP'442. Applicant respectfully traverses the Examiner's rejection of claim 36 for the following, mutually exclusive reasons.

1) Even when combined, the references do not teach the claimed subject matter.

As discussed above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. Applicant has carefully reviewed AAPA and it is clear that AAPA neither discloses nor suggests a method for recycling a rail comprising at least one void extending generally therethrough, the method comprising providing the rail, slitting the rail across the at least one void to separate the rail into first and second pieces and deforming the first and second pieces, as is claimed in claim 36.

AAPA discloses merely separating and scrapping the portion of rail containing a void, and although JP'442 discloses machining a transverse notch into the surface of the rail, it does not disclose slitting the rail to separate the rail into a first piece and a second piece wherein the rail is slit across a void. Therefore, it is impossible to render the subject matter of claim 36 as a whole obvious, and the explicit terms of the statute cannot be met. Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection of claim 36 under 35 U.S.C. § 103(a) should be withdrawn.

2) The references are not properly combinable as the prior art does not suggest the combination.

As discussed above, when considered by a person of ordinary skill in the art, the references must provide some suggestion, desirability, or motivation for combination to support a 35 U.S.C. § 103(a) rejection.

Here, neither AAPA nor JP'442 teaches, or even suggests, the desirability of the combination of elements as proposed by the examiner to reject claim 36 since neither teaches or suggests the desirability of a method for recycling a rail comprising at least one void extending generally therethrough, the method comprising providing the rail, slitting the rail across the at least one void to separate the rail into first and second pieces and deforming the first and second pieces, as is claimed in claim 36.

The method of AAPA includes separation of the portion of rail containing the hole from the rest of the rail and disposal of that portion as scrap prior to deformation of the rail sections. While JP'442 teaches fracturing a rail at a notched stress concentration point, that method involves a superficial notch, not an interior, preexisting hole, and the operation is performed in anticipation of scrapping the entire rail section and not as preparation for subsequent deformation. Therefore, it is clear that neither AAPA nor JP'442 provide any incentive or motivation supporting the desirability of the combination. Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a prima facie case of obviousness clearly cannot be met, and the rejection of claim 36 under 35 U.S.C. § 103(a) should be withdrawn.

F. New Independent Claim 47

New independent claim 47 is patentable over the cited references and AAPA for the following reasons. Claim 47 recites a method for recycling, the method comprising providing a rail wherein the rail comprises a flange, a head, and a web portion linking the flange and the head and slitting the rail longitudinally to separate the rail into a first piece that includes the flange and generally half of the web portion and a second piece that includes the head and the generally other half of the web portion.

The PTO provides in MPEP § 2131 that:

“[t]o anticipate a claim, the reference must teach every element of the claim.”


Therefore, to support a rejection of claim 47, the cited references and AAPA must contain all of the above-noted elements of the claim. Since they do not, it is respectfully submitted that claim 47 is therefore in condition for allowance.

IV. Conclusion

Independent claim 11 stands allowed, and based on the foregoing, independent claims 7, 16, 18, 27, 36, and 47 are respectfully in condition for allowance. As dependent claim 17 depends from and further limits independent claim 16, dependent claims 19-26 depend from and further limit independent claim 18, dependent claims 28-35 depend from and further limit independent claim 27, dependent claims 37-46 depend from and further limit independent claim 36, and dependent claims 48-50 depend from and further limit independent claim 47, these dependent claims are respectfully now in condition for allowance as well. An early formal notice of allowance of claims is requested.

The Examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



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